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MoS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/347,427	07/06/99	CLARK	R M3477.0000/P

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EXAMINER

VARGOT, M

ART UNIT	PAPER NUMBER
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1732

DATE MAILED:

06/13/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No. 427

Applicant(s)

09/347, ~~111~~

CLARK et al.

Examiner

Group Art Unit

M-VARGOT

1732

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 111; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-20 is/are pending in the application.
- Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-20 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
 - ☐ received in Application No. (Series Code/Serial Number) _____.
 - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s) 51
- ☒ Notice of Reference(s) Cited, PTO-892
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, "said mold passageways" should be --said flow passageways--.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maus et al (see Figs. 11A and B and 12A and B concerning optical disk molds) in view of Hambright (col. 4, lines 31-52) or Hambright in view of Maus et al.

Maus et al discloses the basic claimed mold apparatus and process for making molded optical elements including a first mold unit (Fig. 12A) containing mold pins (5a') for defining mold cavities and flow passageways (1') for the molten plastic and a second mold unit (Fig. 12B) having a mold surface for sealing against said first mold unit, the mold surface also having pins or inserts therein (5b') which mate with the mold pins in the first mold to define the mold cavities. As noted at column 24, lines 54-60, one of each pair of inserts 5' are fitted with a stamper, which contains the optical pattern to be molded into the disks. Essentially, Maus et al fails to disclose a second mold unit or puck which contains a plurality of mold patterns by and of itself (ie, in Maus et al, the plurality of patterns are provided by the mold inserts). Hambright discloses molding a

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plurality of diffractive or refractive optical elements using compact disk molding technology, wherein one mold (14) is etched photolithographically (ie, using masks and ion or electron beams, see the abstract) to have the desired optical surface for producing a number of optical elements. Hence, it is known to produce a mold which contains the desired optical element number or configuration directly onto a mold which functions as a compact disk mold. It would have been obvious to one of ordinary skill in the art to modify the mold apparatus and method of Maus et al by providing or forming a second mold unit directly containing the desired optical patterns as taught in Hambright to facilitate processing. On the other hand, using Hambright as the primary reference, it would have been obvious to modify the apparatus and process taught therein with elements of the injection molding shown in Maus et al --ie, flow passageways and mold pins to define mold cavities. The flow passageways are conventional and would be required to injection mold a product. The mold pins are also nothing but conventional in the art to define a mold cavity. The combination as applied also teaches the instant method of making a mold apparatus as set forth in instant claims 17-20.

Maus et al discloses moving the two mold parts toward each other and such is clearly necessary to seal the mold cavities which would be formed. Making the metal puck (or the mold portion which functions as such) removable is clearly disclosed, since in fact the molds must be separated to remove the products. It is submitted that the replacement of the metal puck/mold portion with another unit to make products of a different size and shape would have been within the skill level of the art. Hambright teaches (bottom of column 1) that the prior art reuses molds

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by retrofitting different diffractive pins. Clearly, desiring to make different sized or shaped optical articles, an entire mold would be fashioned to facilitate the processing.

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nisper et al discloses masking and ion or electron beam milling methods to make microstructures in a mold.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Vargot whose telephone number is (703) 308-2621.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

M. Vargot

June 12, 2000

MATTHEW S. VARGOT
PRIMARY EXAMINER
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